

What is claimed is:

[Claim 1] A photocathode manufacturing intermediary article comprising:

a substrate layer; and,
an active layer carried by the substrate layer, the active layer including photoemissive alkali antimonide material epitaxially grown on the substrate.

[Claim 2] The invention of claim 1 wherein the substrate includes spinel.

[Claim 3] The invention of claim 2 wherein the spinel has a lattice constant of 8.083Å.

[Claim 4] The invention of claim 1 wherein the alkali antimonide material is in a cubic phase.

[Claim 5] The invention of claim 1 wherein the alkali antimonide material has a lattice constant between 7.73 and 9.18 Å.

[Claim 6] A method for making a photocathode manufacturing intermediary article comprising:

forming an active layer carried by a substrate layer, the active layer including photoemissive alkali antimonide material epitaxially grown on the substrate.

[Claim 7] The method of claim 6 wherein the substrate includes spinel.

[Claim 8] The method of claim 7 wherein the spinel has a lattice constant of 8.083Å.

[Claim 9] The method of claim 6 wherein the alkali antimonide material is in a cubic phase.

[Claim 10] The method of claim 6 wherein the alkali antimonide material has a lattice constant between 7.73 and 9.18 Å.